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Phase I Environmental Site Assessment

Residential Properties
72-74 St. Andrew Street
and 73-77 Guigues Avenue
Ottawa, Ontario

Prepared For

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September 29, 2017

Report: PE4116-1

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EXECUTIVE SUMMARY

Assessment

A Phase I – Environmental Site Assessment was carried out for the properties addressed 72-74 St. Andrew Street and 73-77 Guigues Avenue in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to impact the subject property.

Based on a review of historical sources, the subject property was developed with residential dwellings by 1888. No historical potentially contaminating activities (PCAs) were identified on the Phase I property. Surrounding properties have been residential and commercial since their initial development in the 1800s. Multiple historical PCAs, such as automotive service garages, retail fuel outlets and dry-cleaning operations were identified within the Phase I study area. Based on the distance and/or down- or cross-gradient orientation with respect to the subject site, the identified PCAs are not considered to have resulted in areas of potential environmental concern (APECs) on the subject property.

Following the historical review, a site visit was conducted. The subject property is occupied by two (2) residential apartment buildings and one (1) detached garage, with the remainder of the site asphalt and grass covered. Due to the age of the onsite buildings, hazardous building materials such as asbestos, lead and mercury are considered to potentially be present. No significant environmental concerns were identified on the subject site at the time of the site visit.

The surrounding land use consisted predominantly of residential properties with some commercial buildings. No current PCAs were identified within the Phase I study area, and therefore no APECs are suspected on the subject site.

Based on the results of this Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is not required for the property.**

Recommendations

It is our understanding that demolition work is intended to take place on the subject site. Considering the potential presence of hazardous building materials within the subject buildings, it is recommended that a designated substance survey be conducted in accordance with Ontario Regulation 490/09, under the Occupational Health and Safety Act, if one has not already been completed.

1.0 INTRODUCTION

At the request of Kasuco Mortgages and Investments Inc., Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (Phase I-ESA) of 72-74 St. Andrew Street and 73-77 Guigues Avenue, in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject properties.

Paterson was engaged to conduct this Phase I-ESA by Ms. Cynthia Kasem of Kasuco Mortgages and Investment Inc.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I-ESA report has been prepared in general accordance with the requirements of Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Addresses: 72-74 St. Andrew Street and 73-77 Guigues Avenue, Ottawa, Ontario.

Legal Description: Part of Lot 10, Plan 42482, in the City of Ottawa, Ontario.

Property Identification
Number:

04216-0098

Location: The subject site is located on the east side of Parent Avenue, in between St. Andrew Street and Guigues Avenue.

Latitude and Longitude: 45° 25' 52" N, 75° 41' 43" W

Site Description:

Configuration: Rectangular

Site Area: 745 m² (approximate)

Zoning: R4S – Residential

Current Use: The subject site is occupied by two (2) residential apartment buildings and one (1) detached garage.

Services: The subject site is situated in a municipally serviced area.

3.0 SCOPE OF INVESTIGATION

The scope of work for this Phase I – Environmental Site Assessment was as follows:

- Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- Provide a preliminary environmental site evaluation based on our findings;
- Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250 m was determined to be appropriate as a Phase I ESA study area for this assignment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distance from the site.

First Developed Use Determination

Based on a review of historically available information, the Phase I property appears to have been first developed with a residential dwelling prior to 1888. For the purposes of this report, the first developed use of the Phase I property is considered to have been residential.

National Archives

Fire insurance plans from 1888, 1912, and 1956 were reviewed for the area of the subject site. The subject property and surrounding properties were developed with residential dwellings in 1888. At that time, Parent Avenue (formerly Barrett's Lane) did not exist and Barrett's Lane did not extend north beyond Guigues Avenue (formerly Church Street). The 1912 FIP indicates that Barrett's Lane extends north to Bruyere Street (formerly Water Street) and that the current building at 72-74 St. Andrew Street is present. The 1956 FIP indicates that all of the current subject site building structures are present and that Barrett Lane has been widened and renamed Parent Avenue. Due to the widening of the road, the subject site is positioned immediately adjacent to Parent Avenue, in between St. Andrew Street and Guigues Avenue. Surrounding properties were residential, with a gasoline service station approximately 175 m west of the subject site, at the corner of Sussex Drive and St. Andrew Street. Based on its distance from the subject site, the gasoline service station is not considered to represent an Area of Potential Environmental Concern (APEC) on the subject site.

Directories were reviewed at the National Archives for the subject site and properties within the Phase I study area, from 1922 through 2011. The subject site has been listed as residential dwellings since 1922. No concerns were noted in the City directories with respect to the former uses of the subject site.

The properties in the Phase I study area have historically been used for residential purposes, with some commercial/retail purposes. The following property uses are considered to be Potentially Contaminating Activities (PCAs) in the Phase I study area.

Table 1 – City Directories - PCAs			
Address	Land Use	Directory Year(s)	Distance from Subject Site
337 Sussex Dr.	Maxwell Albert Service Station	1966	175 m west
	Rochon Jean P. Service Station	1955	
	Shell Oil Co. Service Station	1944, 1933	
429 Sussex Dr.	Superior Cleaners and Dyers	1955	250 m southwest
261 St. Patrick St.	Brown's Cleaners	2011	225 m east
	La Boutique Cleaning	1988, 1977, 1966	
111 Parent Ave.	Champagne and Sons Auto	1955, 1944	200 m southeast
166 Dalhousie St.	Imperial Radiator Service	1966	230 m north
191 Dalhousie St.	Ottawa and Battery Tire Co.	1955, 1944	155 m northeast
	Lemay T Auto Service	1933	
205 Dalhousie St.	Comet Press Commercial Printing	1977	150 m northeast
206 Dalhousie St.	Dalhousie Cleaners	1966, 1955	135 m northeast
	Veteran Dry Cleaner	1944	135 m northeast
215 Dalhousie St.	Ike's Auto Centre	1999, 1988	150 m northeast
	Belisle Eugene Auto Service Station	1955	
227 Dalhousie St.	Dominion Garage	1944	155 m east
	Ottawa Garage Co.	1933	
229 Dalhousie St.	Fred's Body Shop Auto Repairs	1977	155 m east
238 Dalhousie St.	Auto Shop	2000	160 m east
	Paul Service Store Dry Cleansers	1960	
263 Dalhousie St.	Ottawa Valet Service Dry Cleaners	1960	170 m east
272 Dalhousie St.	Spic and Span Cleaners	1970, 1960	175 m east

Due to their distances and/or down- or cross-gradient location with respect to the subject site, these PCAs are not considered to represent APECs on the subject site.

Plan of Survey

A 1980 survey prepared by Farley & Martin Ltd. was reviewed as a part of this assessment. The survey plan shows the south portion of the Phase I property, 73-77 Guigues Avenue, in its current configuration.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on September 21, 2017. The Phase I property was not listed in the NPRI database. The database had listed one (1) record of pollutant release within the Phase I study area, from the Royal Canadian Mint located at 320 Sussex Drive, approximately 240 m west of the subject site. Emissions to air include lead, copper, cadmium and others. Due to the spatial distance from the subject site and the nature of the release, the Royal Canadian Mint is not considered to represent environmental concerns at the subject site.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I study area.

Ontario Ministry of Environment and Climate Change (MOECC) Instruments

A request was submitted to the MOECC Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MOECC issued instruments for the site. At the time of issuing this report, a response from the MOECC had not been received.

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified in the Phase I study area.

MOECC Incident Reports

A request was submitted to the MOECC Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. At the time of issuing this report, a response from the MOECC had not been received.

MOECC Waste Management Records

A request was submitted to the MOECC Freedom of Information office for information with respect to waste management records. At the time of issuing this report, a response from the MOECC had not been received.

MOECC Submissions

A request was submitted to the MOECC Freedom of Information office for information with respect to reports related to environmental conditions for the property. At the time of issuing this report, a response from the MOECC had not been received.

MOECC Brownfields Environmental Site Registry

A search of the MOECC Brownfields Environmental Site Registry was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. No Records of Site Condition (RSCs) were filed for the Phase I property or for other properties within the Phase I study area.

MOECC Waste Disposal Site Inventory

The Ontario Ministry of Environment and Climate Change document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario.

The review identified one (1) former waste disposal site that closed in 1926, located approximately 430 m northeast of the subject site. Due to its distance and/or down- or cross-gradient location with respect to the subject site, this PCA is not considered to represent an APEC on the subject site.

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I study area was conducted on the web site of the Ontario Ministry of Natural Resources (MNR) on September 21, 2017. No areas of natural significance were identified on the Phase I property or within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on September 21, 2017 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. According to the TSSA, no records exist for the subject site or neighbouring properties. The TSSA correspondence is attached under Appendix 2.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa”, was reviewed. No landfill sites were identified in the vicinity of the Phase I property or Phase I study area.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. The review period dates back to the first available air photos for the site. Based on the review, the following observations have been made:

1922	The subject site appears to be occupied by the current residential building structures. Properties appear present between the subject site and Parent Avenue (formerly Barrett's Lane), suggesting that Parent Avenue had not yet been widened and likely still existed as Barrett's Lane. The adjacent properties are also developed with residential dwellings.
1958	No significant changes appear to have been made to the subject site. Parent Avenue appears to have been widened, existing as it does today and the subject site is immediately adjacent to Parent Avenue. No significant changes appear to have been made to neighbouring properties.
1966	No apparent changes have been made to the Phase I site or surrounding properties.
1973	No apparent changes have been made to the Phase I site or surrounding properties.
1988	No apparent changes have been made to the Phase I site or surrounding properties.

1993	No apparent changes have been made to the Phase I site or surrounding properties.
2003	No apparent changes have been made to the Phase I site or surrounding properties.
2008	(City of Ottawa website) No apparent changes have been made to the Phase I site or surrounding properties.
2014	(City of Ottawa website) No apparent changes have been made to the Phase I site or surrounding properties.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic information was obtained from Natural Resources Canada – The Atlas of Canada website. The topographic maps indicate that the elevation of the subject site is approximately 65 m ASL, and that the regional topography in the general area of the site slopes downward to the northwest, towards the Ottawa River. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada – The Atlas of Canada website, as a part of this assessment. According to the publication and mapping, the site is situated within the St. Lawrence Lowlands, Till Plains (Drumlinized) physiographic region. According to the mapping description provided: “The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets.” Mapping shows the subject site as situated on an area of till.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of interbedded limestone and shale of the Verulam Formation. Overburden consists of offshore marine sediments, with a drift thickness on the order of 2 to 3 m.

Water Well Records

A search of the MOECCs web site for all drilled well records within 250 m of the subject site was conducted on September 21, 2017. Based on the search results, no water well records were identified. Records for fourteen (14) monitoring wells were identified in the Phase I study area with the nearest monitoring well located approximately 100 m east of the subject site.

Water Bodies and Areas of Natural Significance

The Ottawa River is the closest significant water body and is present approximately 350 m to the west of the Phase I property. The outlet of the Rideau Canal is present approximately 525 m to the southwest of the subject site. No creeks, streams, lakes or other water bodies were identified in the Phase I study area. No areas of natural significance were identified within the Phase I study area.

5.0 INTERVIEWS

Property Owner Representative

Mr. Paul Graziadei, the subject property owner since 1975, was interviewed in person during the site visit. Mr. Graziadei stated that prior to his ownership, his father had owned the property. Mr. Graziadei said that he had lived in the neighbourhood his entire life, within a couple of blocks of the subject site. Mr. Graziadei was not aware of any environmental concerns with the subject site or surrounding properties.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site assessment was conducted on September 18, 2017. Weather conditions were sunny, with a temperature of approximately 30°C. Personnel from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site visit.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The property addressed 72-74 St. Andrew Street is occupied by a four (4) unit apartment building that was originally constructed around 1900. The building was originally two (2) units but was converted to four (4) units in the 1940/1950s. The apartment building has a stone foundation with a short crawl space, is two (2) storeys and has a flat, tar and gravel roof. Also on the property is a detached garage with a concrete floor, cinder block walls and an A-frame asphaltic shingled roof, constructed in the 1940/1950s.

The property addressed 73-77 Guigues Avenue is occupied by a three (3) unit apartment building with an unknown construction date but is estimated around 1900 also. The building has a stone foundation with a short crawl space, is two (2) storeys and has a flat, tar and gravel roof. The approximate location of the structures is shown on Drawing PE4116-1 – Site Plan, in the Figures section following the text portion of this report.

Site Features

The majority of the Phase I property is developed. Areas not covered by building structures are finished with asphalt and minor grassed areas are present along the perimeter of the buildings.

In general, the Phase I property is relatively flat. The topography of the Phase I ESA study area slopes down to the northwest. Site drainage consists primarily of sheet flow to catch basins along St. Andrew Street, Parent Avenue and Guigues Avenue.

No vent or fill pipes or other indications of current or former aboveground or underground storage tanks, were noted on the exterior of the property at the time of the site visit. No evidence of current or former railway and spur lines were observed on the Phase I property at the time of the site visit. There were no unidentified substances observed on the Phase I property at the time of the visit.

Underground Utilities

The subject site is located in a municipally serviced area.

Waste Materials

Waste materials generated on the subject site include residential municipal waste which is removed by the City of Ottawa on a weekly basis.

Storage Tanks

No aboveground storage tanks (ASTs) or signs of underground storage tanks (USTs) were observed on the property at the time of the site visit. However, Mr. Graziadei stated that former fuel oil tanks were situated on the north side of 73-77 Guigues Avenue prior to the site's conversion to electric heat. Also, 72-74 St. Andrew Street previously had an AST situated within the crawl space but this was removed when the site was converted to natural gas. No staining or adverse odours were noted in the locations of the former ASTs.

Drains, Pits and Sumps

No drains, pits or sumps were observed at the subject site. Wastewater generated onsite is discharged to the municipal sanitary system. No concerns were identified with respect to wastewater discharges at the Phase I property

Unidentified Substances

No unidentified substances were noted on the Phase I property at the time of the site visit.

Hazardous Building Materials

Potentially hazardous building materials were identified in both site buildings. Due to the age of the structures, asbestos containing materials (ACMs) are considered to potentially be present. Potential ACMs identified were exterior stucco finishes, plaster walls and ceilings, linoleum and vinyl tile flooring, and insulation board observed within the crawl space of 72-74 St. Andrew Street. Also considered to be potentially present is lead-based paint, mercury containing non-digital thermostats and light bulbs, and ozone depleting substances within refrigerators, freezers and window mount A/C units.

Phase I Study Area

An inspection of the neighbouring properties was conducted from publicly accessible roadways at the time of the site inspection. Land use adjacent to the subject site was as follows:

- ☐ North - St. Andrew Street, followed by residential properties;
- ☐ South - Guigues Avenue, followed by residential properties;
- ☐ East - Residential properties;
- ☐ West - Parent Avenue, followed by residential properties.

No PCAs were identified in the Phase I study area at the time of the site visit. Property use within the Phase I study area is presented on Drawing PE4116-2 – Surrounding Land Use Plan.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following table indicates the current and past uses of the site dating back to the first developed use of the site.

Table 2 - Land Use History				
Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photos, FIPs, etc.
1888 to present	-Paul Graziadei (since 1975) - Father of Above -Unknown	Residential	Residential	1922, 1958, 1963, 1977, 1988, 1993, 2003, 2008, and 2014 aerial photos show the site as occupied by the current residential building structures.

Potentially Contaminating Activities (PCAs)

Potentially Contaminating Activities (PCAs) were not identified on the Phase I property. Multiple PCAs were identified on properties in the Phase I study area.

Most of these PCAs consist of former automotive service garages, retail fuel outlets and dry cleaning facilities east of the subject site along Dalhousie Street. Other PCAs were identified south and west of the subject site along Parent Avenue and Sussex Drive, respectively.

Areas of Potential Environmental Concern (APECs)

Based on their distances and/or down- or cross-gradient location with respect to the subject site, the identified PCAs are not considered to represent Areas of Potential Environmental Concern (APECs) on the subject site.

Contaminants of Potential Concern (CPCs)

No contaminants of concern (CPCs) were identified on the Phase I property.

7.2 Conceptual Site Model

Existing Buildings and Structures

The subject site is occupied by two (2) residential dwellings and one (1) detached garage. The dwellings were constructed around 1900 while the garage was constructed in the 1940s/1950s.

Geological and Hydrogeological Setting

The subject site is located in an area of offshore marine sediments. Groundwater flow is expected to reflect site topography and flow in a northwesterly direction.

Water Bodies

The closest water body is the Ottawa River, located approximately 350 m to the west of the site. There are no water bodies on the subject site or within the Phase I study area.

Areas of Natural Significance

No areas of natural significance were identified within the Phase I study area.

Water Wells

A search of the MOECC's web site for all drilled well records within 250 m of the subject site was conducted on September 21, 2017. Based on the search results, no wells were located on the subject site. No potable well records were identified within the Phase I study area. Records for fourteen (14) monitoring wells were identified within the Phase I study area, none of which were within 100 m of the subject site.

Neighbouring Land Use

Neighbouring land use in the Phase I study area is currently residential, commercial and institutional. The residential properties consist of single detached, duplex and multi-unit dwellings. Commercial buildings are present further to the northeast, east and southeast, and institutional buildings are present to the north. Neighbouring land use does not pose an environmental concern to the subject site.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, several PCAs were identified within the Phase I study area. However, based on the age and/or distance of the PCAs from the subject site, they are not considered to represent APECs.

Contaminants of Potential Concern

No CPCs were identified on the Phase I property.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are no areas of potential environmental concern (APECs) on the subject site. The presence of potentially contaminating activities (PCAs) was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSION

Assessment

A Phase I – Environmental Site Assessment was carried out for the properties addressed 72-74 St. Andrew Street and 73-77 Guigues Avenue in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to impact the subject property.

Based on a review of historical sources, the subject property was developed with residential dwellings by 1888. No historical potentially contaminating activities (PCAs) were identified on the Phase I property. Surrounding properties have been residential and commercial since their initial development in the 1800s. Multiple historical PCAs, such as automotive service garages, retail fuel outlets and dry-cleaning operations were identified within the Phase I study area. Based on the distance and/or down- or cross-gradient orientation with respect to the subject site, the identified PCAs are not considered to have resulted in areas of potential environmental concern (APECs) on the subject property.

Following the historical review, a site visit was conducted. The subject property is occupied by two (2) residential apartment buildings and one (1) detached garage, with the remainder of the site asphalt and grass covered. Due to the age of the onsite buildings, hazardous building materials such as asbestos, lead and mercury are considered to potentially be present. No significant environmental concerns were identified on the subject site at the time of the site visit.

The surrounding land use consisted predominantly of residential properties with some commercial buildings. No current PCAs were identified within the Phase I study area, and therefore no APECs are suspected on the subject site.

Based on the results of this Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is not required for the property.**

Recommendations

It is our understanding that demolition work is intended to take place on the subject site. Considering the potential presence of hazardous building materials within the subject buildings, it is recommended that a designated substance survey be conducted in accordance with Ontario Regulation 490/09, under the Occupational Health and Safety Act, if one has not already been completed.

9.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject site and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Kasuco Mortgages & Investments Inc. Permission and notification from Kasuco and Paterson will be required to release this report to any other party.

Paterson Group Inc.



Greg van Loenen, B.Eng.



Mark S. D'Arcy, P.Eng., QP_{ESA}



Report Distribution:

- Kasuco Mortgages and Investments Inc. (1 copy)
- Paterson Group Inc. (1 copy)

10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.
National Archives.
Maps and photographs (Geological Survey of Canada surficial and subsurface).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records

MOECC Freedom of Information and Privacy Office.
MOECC Municipal Coal Gasification Plant Site Inventory, 1991.
MOECC document titled “Waste Disposal Site Inventory in Ontario”.
MOECC Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MOECC Water Well Inventory.
Chapman, L.J., and Putnam, D.F., 1984: ‘The Physiography of Southern Ontario, Third Edition’, Ontario Geological Survey Special Volume 2.

Municipal Records

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites”, prepared by Golder Associates, 2004.
The City of Ottawa Historical Land Use Inventory.
Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.
The City of Ottawa eMap website.

Local Information Sources

Topographical Plan, prepared by Farley & Martin Ltd., 1980.
Personal Interviews.

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4116-1 – SITE PLAN

DRAWING PE4116-2 – SURROUNDING LAND USE PLAN

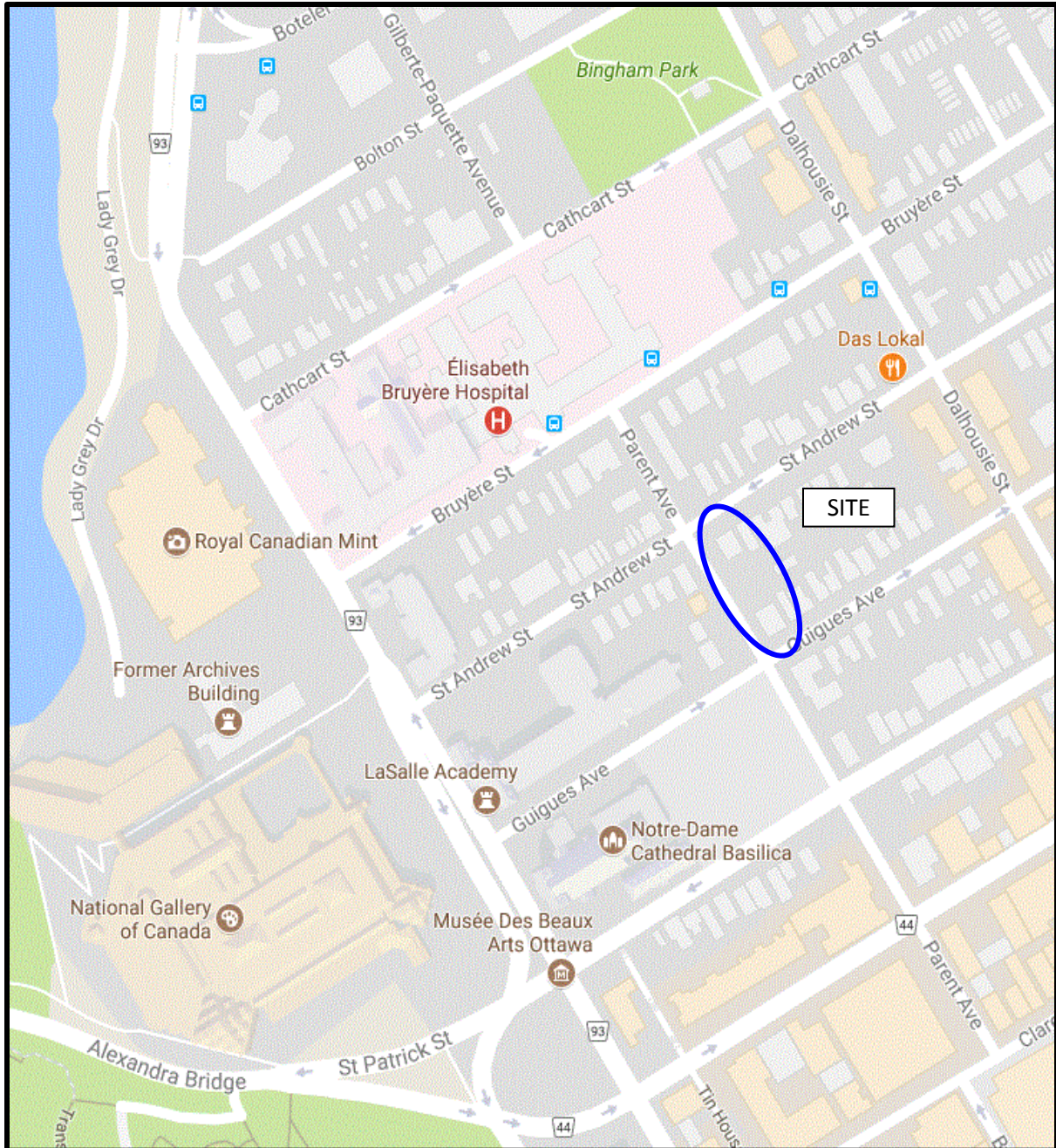


FIGURE 1
KEY PLAN

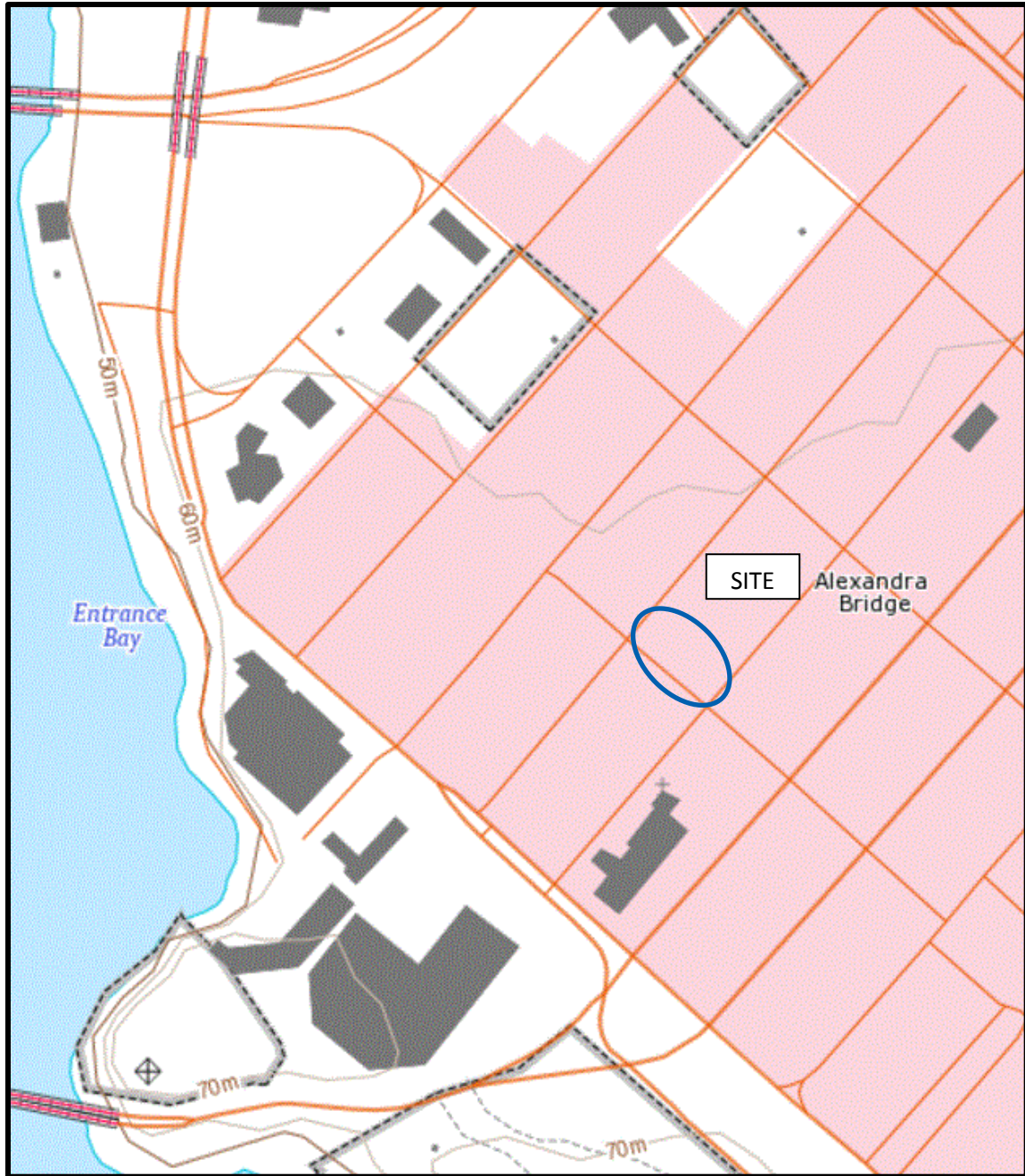
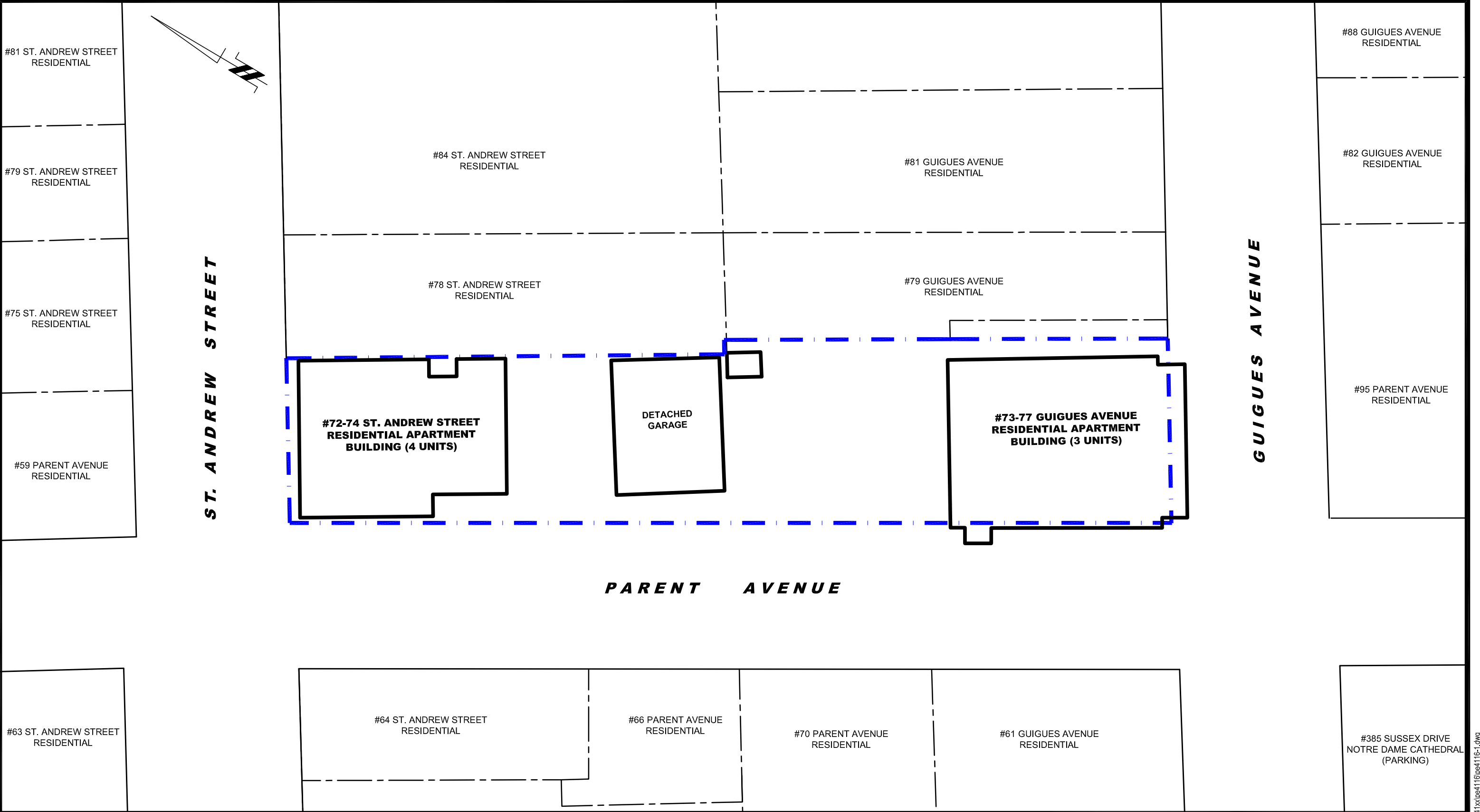


FIGURE 2
TOPOGRAPHIC MAP



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consulting engineers

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Tel: (613) 226-7381 Fax: (613) 226-6344

0			
NO.	REVISIONS	DATE	INITIAL

KASUCO MORTGAGES

PHASE I - ENVIRONMENTAL SITE ASSESSMENT

72 & 74 ST. ANDREW STREET AND 73 & 77 GUIGUES AVENUE

OTTAWA, ONTARIO

Title:

SITE PLAN

Scale:	1:250	Date:	10/2017
Drawn by:	RCG	Report No.:	PE4116-1
Checked by:	GVL	Dwg. No.:	PE4116-1
Approved by:	MSD	Revision No.:	0



- POTENTIALLY CONTAMINATING ACTIVITIES:**
- 337 SUSSEX DRIVE - FORMER RETAIL FUEL OUTLET (ITEM 28)
 - 111 PARENT AVENUE - FORMER AUTOMOTIVE SERVICE GARAGE (ITEM 52)
 - 272 DALHOUSIE STREET - FORMER DRY CLEANING FACILITY (ITEM 37)
 - 263 DALHOUSIE STREET - FORMER DRY CLEANING FACILITY (ITEM 37)
 - 229 DALHOUSIE STREET - FORMER AUTOMOTIVE SERVICE GARAGE (ITEM 52)
 - 227 DALHOUSIE STREET - FORMER AUTOMOTIVE SERVICE GARAGE (ITEM 52)
 - 261 ST. PATRICK STREET - FORMER DRY CLEANING FACILITY (ITEM 37)
 - 238 DALHOUSIE STREET - FORMER AUTOMOTIVE SERVICE GARAGE, FORMER DRY CLEANING FACILITY (ITEM 52, ITEM 37)
 - 429 SUSSEX DRIVE - FORMER DRY CLEANING FACILITY (ITEM 37)
 - 166 DALHOUSIE STREET - FORMER AUTOMOTIVE SERVICE GARAGE (ITEM 52)
 - 191 DALHOUSIE STREET - FORMER AUTOMOTIVE SERVICE GARAGE (ITEM 52)
 - 205 DALHOUSIE STREET - FORMER COMMERCIAL PRINTING
 - 206 DALHOUSIE STREET - FORMER DRY CLEANING FACILITY (ITEM 37)
 - 215 DALHOUSIE STREET - FORMER AUTOMOTIVE SERVICE GARAGE (ITEM 52)

 154 Colonnade Road South Ottawa, Ontario K2E 7J5 Tel: (613) 226-7381 Fax: (613) 226-6344					KASUCO MORTGAGES		Scale: 1:3000	Date: 09/2017
					PHASE I - ENVIRONMENTAL SITE ASSESSMENT		Drawn by: RCG	Report No.: PE4116-1
					72 & 74 ST. ANDREW STREET AND 73 & 77 GUIGUES AVENUE		Checked by: GVL	Dwg. No.: PE4116-2
					OTTAWA, ONTARIO		Approved by: MSD	Revision No.: 0
					Title: SURROUNDING LAND USE PLAN			
	NO.	REVISIONS	DATE	INITIAL				

p:\autocad drawings\environmental\pe4116\pe4116-2.dwg

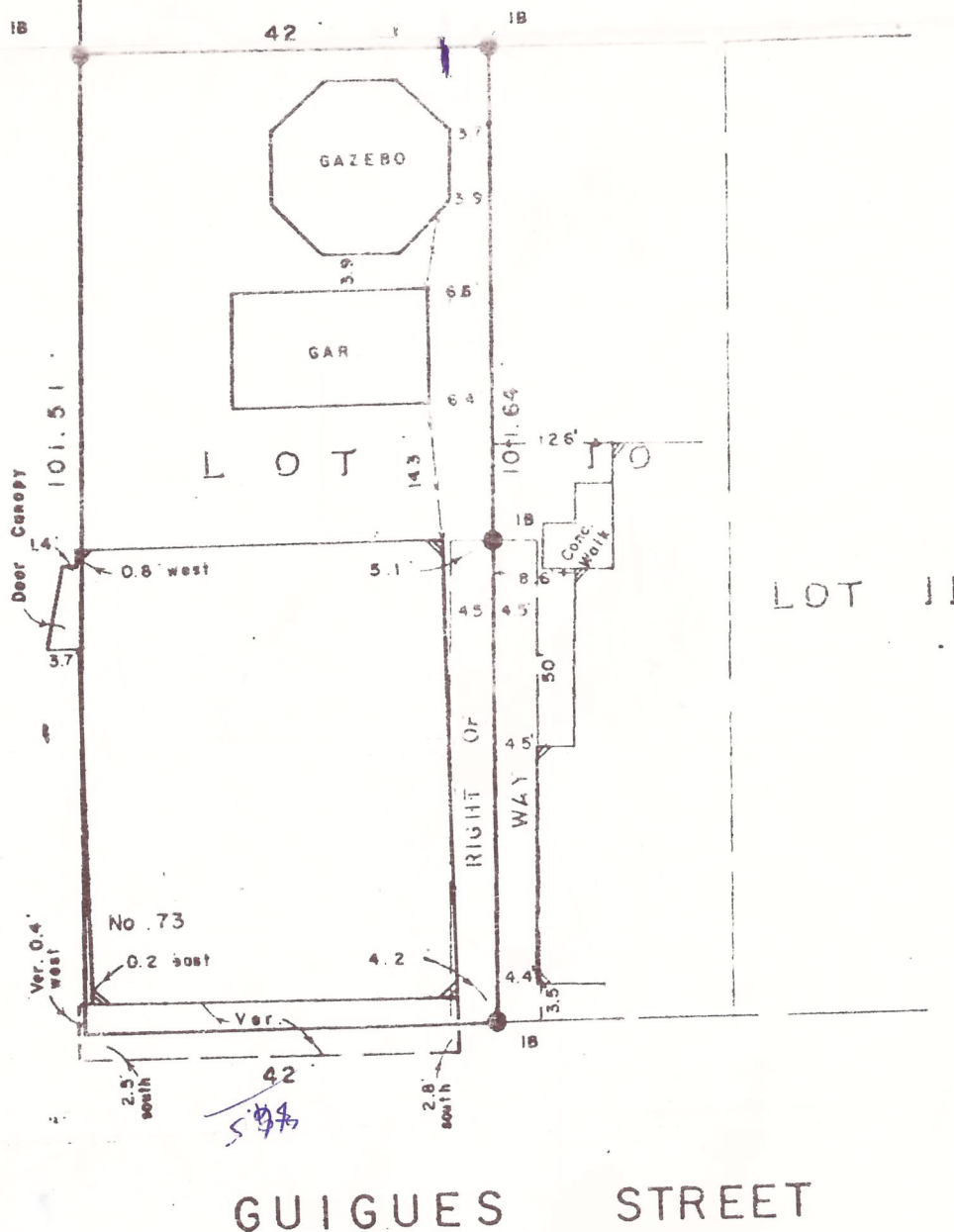
APPENDIX 1

PLAN OF SURVEY

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

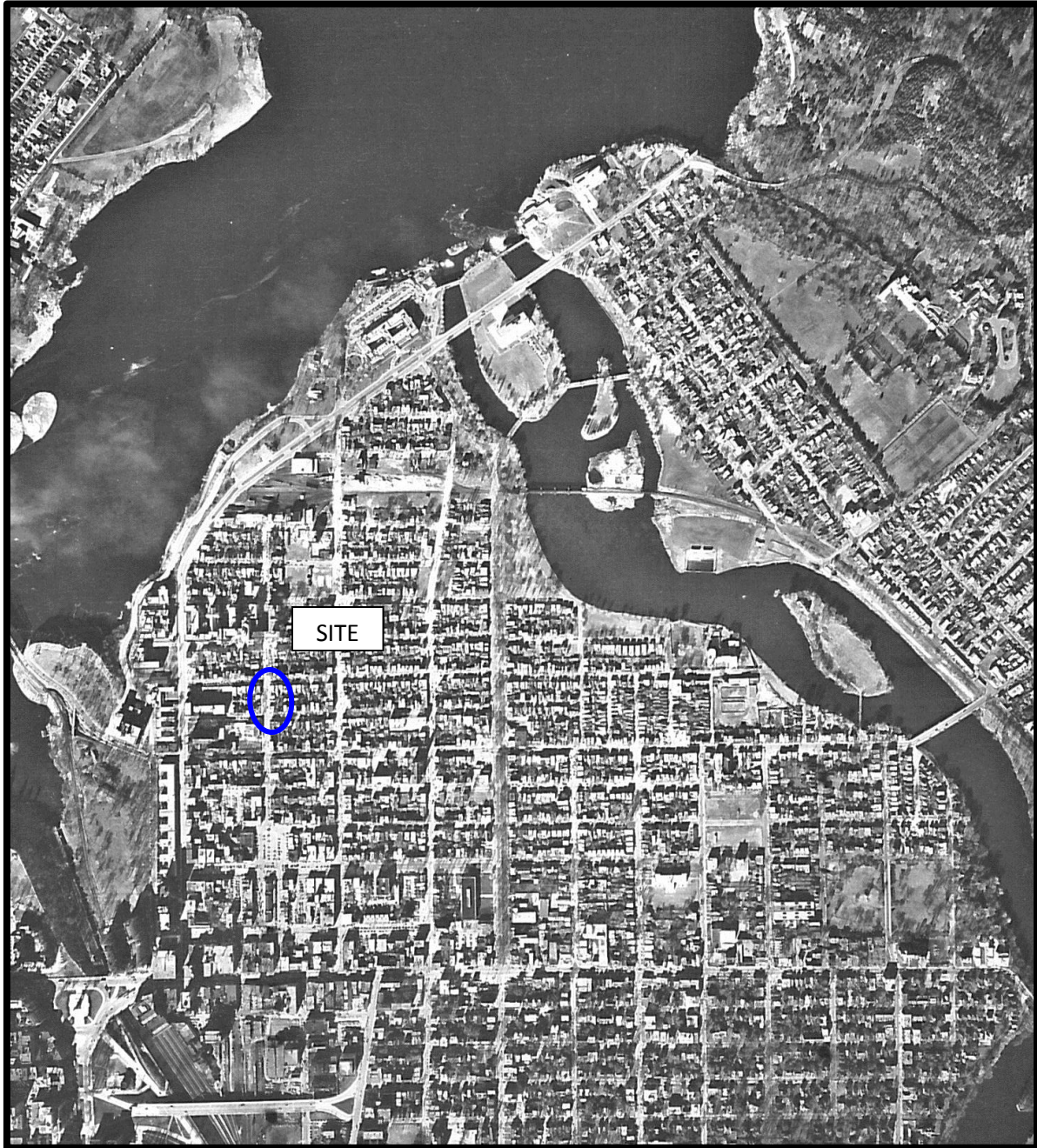
A hand-drawn diagram showing a line with a point labeled 'a' on it. The line is drawn with two parallel strokes, one solid and one slightly offset. A small 'a' is written near the intersection of the two strokes. The line extends from the bottom left towards the top right.



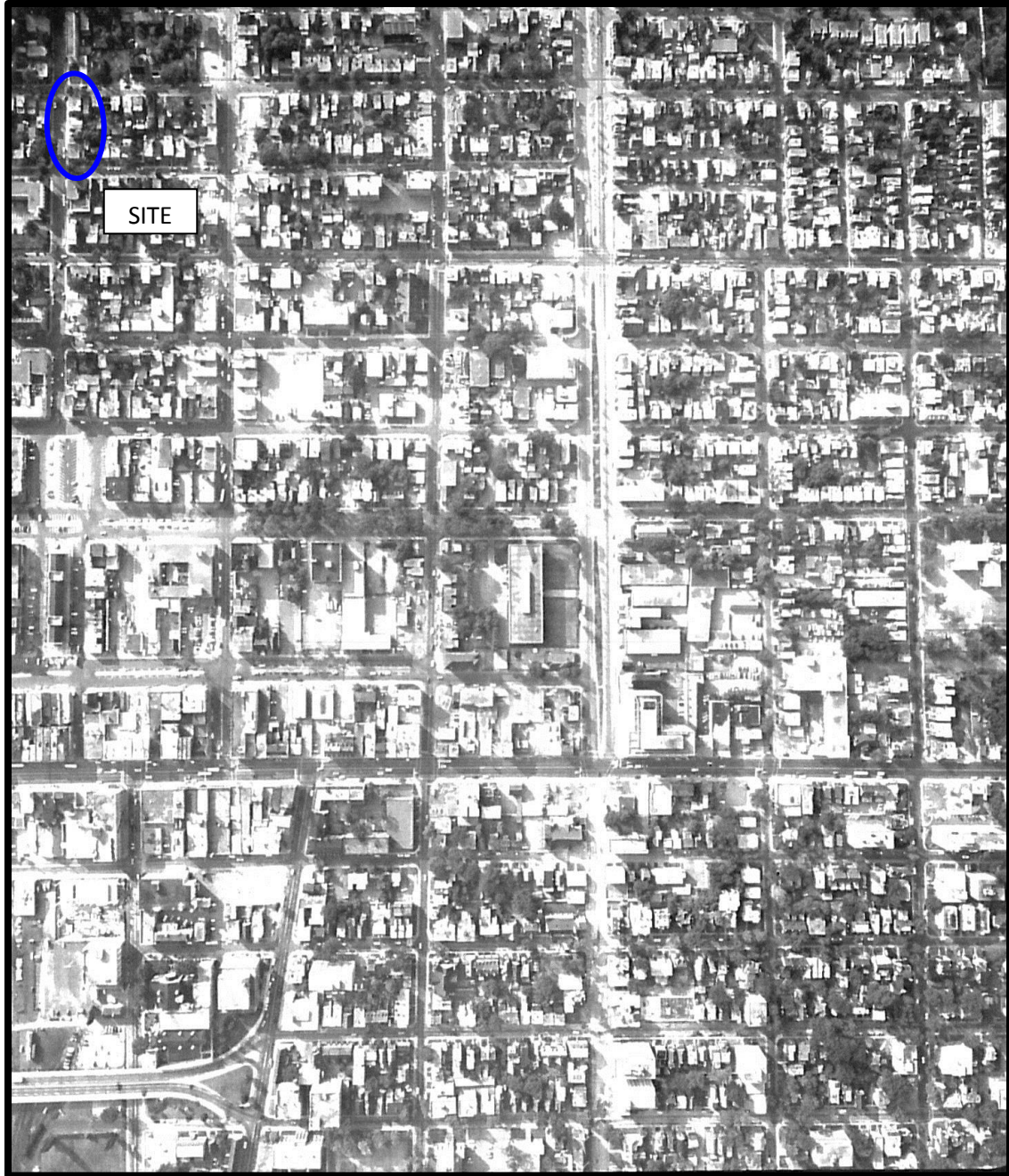
H. R. Fawcett



AERIAL PHOTOGRAPH
1922



AERIAL PHOTOGRAPH
1958



AERIAL PHOTOGRAPH
1966



AERIAL PHOTOGRAPH
1973



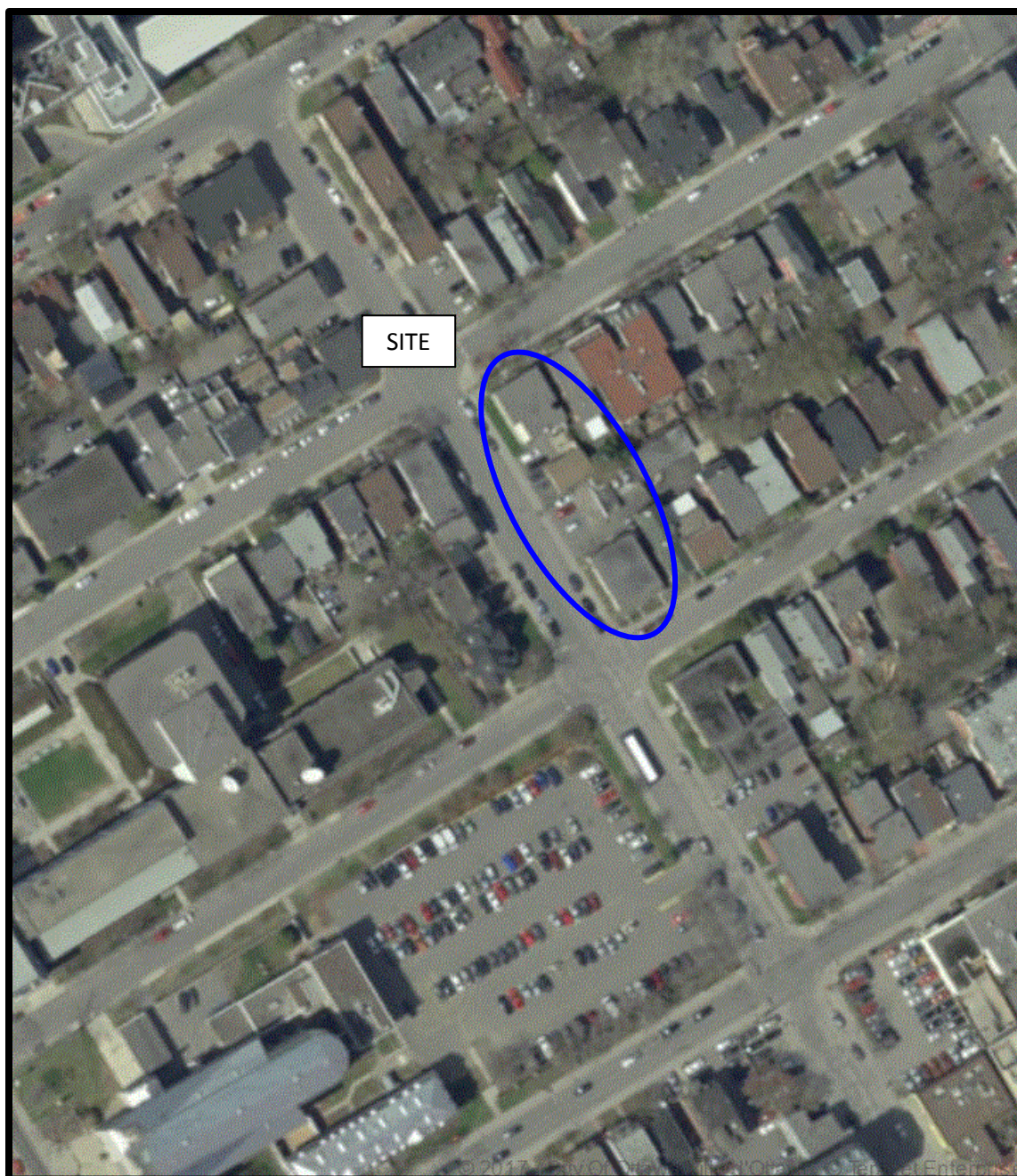
AERIAL PHOTOGRAPH
1988



AERIAL PHOTOGRAPH
1993



AERIAL PHOTOGRAPH
2003



AERIAL PHOTOGRAPH
2014

Site Photographs

PE4116

72-74 St. Andrew Street and 73-77 Guigues Avenue, Ottawa, ON

Sept 18, 2017



Photograph 1: View of the 73-77 Guigues Avenue, facing northeast. Photograph also depicts 72-74 St. Andrew Street on the left side.



Photograph 2: View of 72-74 St. Andrew Street, facing southeast. Photograph also depicts 73-77 Guigues Avenue on the right side.

Site Photographs

PE4116

72-74 St. Andrew Street and 73-77 Guigues Avenue, Ottawa, ON

Sept 18, 2017



Photograph 3: View of back side of 72-74 St. Andrew Street and detached garage, facing east.



Photograph 4: View of suspected asbestos containing insulation board fastened to floor joists within the basement of 72-74 St. Andrew Street.

APPENDIX 2

MOECC FREEDOM OF INFORMATION SEARCH REQUEST

TSSA CORRESPONDENCE

MOECC WATER WELL RECORDS



Freedom of Information Request

This form is for requesting documents which are in the Ministry's files on environmental concerns related to properties. Please refer to the guide on completion and use of this form. Our fax no. is (416) 314-4285.

Requester Data			For Ministry Use Only	
Name, Company Name, Mailing Address and Email Address of Requester Greg van Loenen Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5 Email address: gvanloenen@patersongroup.ca			FOI Request No.	Date Request Received
			Fee Paid <input type="checkbox"/> ACCT <input type="checkbox"/> CHQ <input type="checkbox"/> VISA/MC <input type="checkbox"/> CASH	
Telephone/Fax Nos. Tel. 613-226-7381 Fax 613-226-6344	Your Project/Reference No. PE4116	Signature/Print /Name of Requester Greg van Loenen	<input type="checkbox"/> CNR <input type="checkbox"/> ER <input type="checkbox"/> NOR <input type="checkbox"/> SWR <input type="checkbox"/> WCR <input type="checkbox"/> SAC <input type="checkbox"/> IEB <input type="checkbox"/> EAA <input type="checkbox"/> EMR <input type="checkbox"/> SWA	
Request Parameters				
Municipal Address / Lot, Concession, Geographic Township (Municipal address essential for cities, towns or regions) 72 - 74 St. Andrew Street and 73-77 Guigues Avenue, Ottawa, ON				
Present Property Owner(s) and Date(s) of Ownership 519121 Ontario Inc.				
Previous Property Owner(s) and Date(s) of Ownership				
Present/Previous Tenant(s), (if applicable)				
Search Parameters			Specify Year(s) Requested	
<i>Files older than 2 years may require \$60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.</i>				
Environmental concerns (General correspondence, occurrence reports, abatement)			all	
Orders			all	
Spills			all	
Investigations/prosecutions ➤ Owner AND tenant information must be provided			all	
Waste Generator number/classes			all	
Certificates of Approval ➤ Proponent information must be provided				
1985 and prior records are searched manually. Search fees in excess of \$300.00 could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). If supporting documents are also required, mark SD box and specify type e.g. maps, plans, reports, etc.				
	SD	Specify Year(s) Requested		
air - emissions		1986-present		
water - mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)		1986-present		
sewage - sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations		1986-present		
waste water - industrial discharges		1986-present		
waste sites - disposal, landfill sites, transfer stations, processing sites, incinerator sites		1986-present		
waste systems - PCB destruction, mobile waste processing units, haulers: sewage, non-hazardous & hazardous waste		1986-present		
pesticides - licenses		1986-present		

A \$5.00 non-refundable application fee, payable to the Minister of Finance, is mandatory. The cost of locating on-site and/or preparing any record is \$30.00/hour and 20 cents/page for photocopying and you will be contacted for approval for fees in excess of \$30.00.

RE: Records search request for 73 Guigues Avenue, Ottawa, Ontario

Ruchi Chohan <rchohan@tssa.org> on behalf of
Public Information Services <publicinformationsservices@tssa.org>

Thu 9/28/2017 11:49 AM

To: Greg van Loenen <GvanLoenen@Patersonsgroup.ca>;

Hello Greg,

Thank you for your inquiry.

We have no record in our database of any fuel storage tanks at the subject address (addresses).

For a further search in our archives please submit your request in writing to Public Information Services via e-mail (publicinformationsservices@tssa.org) or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day,

Ruchi

From: Greg van Loenen [mailto:GvanLoenen@Patersonsgroup.ca]
Sent: Thursday, September 21, 2017 3:22 PM
To: Public Information Services <publicinformationsservices@tssa.org>
Subject: Records search request for 73 Guigues Avenue, Ottawa, Ontario

Good afternoon,

Could you please complete a search of your records for underground/aboveground storage tanks, historical spills or other incidents/infractions for the following addresses for properties located in the City of Ottawa, ON:

61 St. Andrew Street
72 St. Andrew Street
74 St. Andrew Street
78 St. Andrew Street

61 Guigues Avenue
73 Guigues Avenue
75 Guigues Avenue
77 Guigues Avenue
79 Guigues Avenue

95 Parent Avenue

Thank you,

Regards,

Greg van Loenen, B.Eng.

patersongroup

solution oriented engineering

60 years serving our clients

154 Colonnade Road South

Ottawa, Ontario, K2E 7J5

Tel: (613) 226-7381 Ext. 248

Fax: (613) 226-6344

Email: GvanLoenen@patersongroup.ca

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

Ministry of
the Environment

Well Tag No. (Place Sticker and/or Print Below)

A092466 A 092466

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☒ Metric ☐ Imperial

7682 Page 1 of 3

Well Owner's Information

First Name City of Ottawa	Last Name / Organization	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) 110 Laurier Ave W.	Municipality Ottawa	Province ON	Postal Code K1P 1J1

Well Location

Address of Well Location (Street Number/Name) Sussex Drive	Township	Lot	Concession
County/District/Municipality	City/Town/Village Ottawa	Province Ontario	Postal Code
UTM Coordinates NAD 83 18 44 55 02 50 30 88 7	Zone	Easting	Northings
Municipal Plan and Sublot Number		Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
BLK	Asphalt	Fill		0	.31
BRN	sand	stones	soft, dry	.31	1.52
GRY	limestone		hard, fractured	1.52	4.88

Annular Space			
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	3.305	Benseal	
3.35	4.88	Filter sand	
3.05			

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input checked="" type="checkbox"/> Test Hole	<input checked="" type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Other, specify		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To	
3.51	PVC	.368	0	2.74	<input type="checkbox"/> Water Supply
					<input type="checkbox"/> Replacement Well
					<input checked="" type="checkbox"/> Test Hole
					<input type="checkbox"/> Recharge Well
					<input type="checkbox"/> Dewatering Well
					<input checked="" type="checkbox"/> Observation and/or Monitoring Hole
					<input type="checkbox"/> Alteration (Construction)
					<input type="checkbox"/> Abandoned, Insufficient Supply
					<input type="checkbox"/> Abandoned, Poor Water Quality
					<input type="checkbox"/> Abandoned, other, specify
					<input type="checkbox"/> Other, specify

Construction Record - Screen				Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To	
4.21	PVC	10	2.74	4.88	<input type="checkbox"/> Water Supply
					<input type="checkbox"/> Replacement Well
					<input checked="" type="checkbox"/> Test Hole
					<input type="checkbox"/> Recharge Well
					<input type="checkbox"/> Dewatering Well
					<input checked="" type="checkbox"/> Observation and/or Monitoring Hole
					<input type="checkbox"/> Alteration (Construction)
					<input type="checkbox"/> Abandoned, Insufficient Supply
					<input type="checkbox"/> Abandoned, Poor Water Quality
					<input type="checkbox"/> Abandoned, other, specify
					<input type="checkbox"/> Other, specify

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Depth (m/ft) From	To
		0	1.52
		1.52	4.88

Business Name of Well Contractor strata Soil Sampling	Well Contractor's Licence No. 7241
Business Address (Street Number/Name) #2-147 West Beaver Creek	Municipality Richmond Hill
Province ON	Postal Code
Business E-mail Address lyb1c6w@records@strata-soil.com	

Bus. Telephone No. (inc. area code) (905) 741-9304	Name of Well Technician (Last Name, First Name) Muir, Mike
Well Technician's Licence No. 3448	Signature of Technician and/or Contractor [Signature]
Date Submitted 20100815	

Results of Well Yield Testing			
After test of well yield, water was:		Draw Down	
<input type="checkbox"/> Clear and sand free		Time (min)	Water Level (m/ft)
<input type="checkbox"/> Other, specify		Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	
Pump intake set at (m/ft)		1	1
Pumping rate (l/min / GPM)		2	2
Duration of pumping hrs + min		3	3
Final water level end of pumping (m/ft)		4	4
If flowing give rate (l/min / GPM)		5	5
Recommended pump depth (m/ft)		10	10
Recommended pump rate (l/min / GPM)		15	15
Well production (l/min / GPM)		20	20
Disinfected?		25	25
<input type="checkbox"/> Yes <input type="checkbox"/> No		30	30
		40	40
		50	50
		60	60

Map of Well Location

Please provide a map below following instructions on the back.

Median

6m

10m

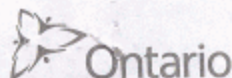
N

Sussex Dr.

St. Patrick

Comments:

Well owner's information package delivered	Date Package Delivered YYYYMMDD 20100728	Ministry Use Only
<input type="checkbox"/> Yes <input type="checkbox"/> No	Date Work Completed YYYYMMDD 20100728	Audit No. z113151
		RAISED AUG 25 2010

Ministry of
the Environment

Well Tag No. (Place Sticker and/or Print Below)

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☒ Metric ☐ Imperial

A092466

A 092467

7682

Page 2 of 3

Well Owner's Information

First Name Last Name / Organization

City of Ottawa

E-mail Address

☐ Well Constructed
by Well Owner

Mailing Address (Street Number/Name)

110 Laurier Ave W.

Municipality

Ottawa

Province

ON

Postal Code

K1P1J1

Telephone No. (inc. area code)

Well Location

Address of Well Location (Street Number/Name)

Sussex Drive

Township

Lot

Concession

County/District/Municipality

City/Town/Village

Ottawa

Province

Ontario

Postal Code

UTM Coordinates

Zone Easting

Northing

1059

Municipal Plan and Sublot Number

Other

NAD 83

18445392

503

0287

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
BLK	Asphalt	Fill		0	.31
BRN	sand	stone	soft, dry	.31	1.83
GRY	limestone		hard, fractured	1.83	4.88

Annular Space			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	
From	To		
0	2.44 Benseal		
2.44	4.88 Filter sand		

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input checked="" type="checkbox"/> Test Hole	<input checked="" type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Other, specify		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	From	To
3.51	PVC	.368	0	3.35	

Construction Record - Screen				Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	From	To
4.21	PVC	10	3.35	4.88	

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Depth (m/ft)	Diameter (cm/in)
		From	To
0	1.83	8.25	
1.83	4.88	5.71	

Well Contractor and Well Technician Information			
Business Name of Well Contractor		Well Contractor's Licence No.	
Arata Soil Sampling		7241	
Business Address (Street Number/Name)		Municipality	
#2-147 West Beaver Creek		Richmond Hill	
Province	Postal Code	Business E-mail Address	
ON	L4B1C6	wrecords@aratasoil.com	
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
(905) 764-9304		Mike	
Well Technician's Licence No.		Signature of Technician and/or Contractor	
3448		20100815	
Date Submitted			

Results of Well Yield Testing

After test of well yield, water was:

- ☐
- Clear and sand free
-
- ☐
- Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping

hrs + min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

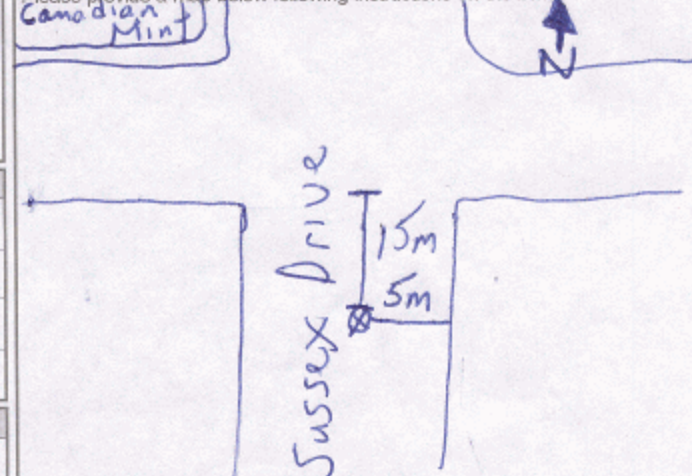
Disinfected?

☐ Yes ☐ No

Draw Down		Recovery	
Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Ministry Use Only	
Audit No.	z113150
Received	AUG 25 2010
Well owner's information package delivered	<input type="checkbox"/> Yes <input type="checkbox"/> No
Date Package Delivered	Y Y Y Y M M D D
Date Work Completed	20100729

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Associate and Supervisor of the Environmental Division
Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991
Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

Associate and Senior Environmental/Geotechnical Engineer
Environmental and Geotechnical Division
Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island
Agricultural Supply Facilities - Eastern Ontario
Laboratory Facility – Edmonton (Alberta)
Ottawa International Airport - Contaminant Migration Study - Ottawa
Richmond Road Reconstruction - Ottawa
Billings Hurdman Interconnect - Ottawa
Bank Street Reconstruction - Ottawa
Environmental Review – Various Laboratories across Canada - CFIA
Dwyer Hill Training Centre – Ottawa
Nortel Networks Environmental Monitoring - Carling Campus – Ottawa
Remediation Program - Block D Lands – Kingston
Investigation of former landfill sites – City of Ottawa
Record of Site Condition for Railway Lands – North Bay
Commercial Properties – Guelph and Brampton
Brownfields Remediation – Alcan Site - Kingston
Montreal Road Reconstruction - Ottawa
Appleford Street Residential Development - Ottawa
Remediation Program - Ottawa Train Yards
Remediation Program - Bayshore and Heron Gate
Gladstone Avenue Reconstruction – Ottawa
Somerset Avenue West Reconstruction - Ottawa

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Environmental Consultant

EDUCATION

Carleton University, B.Eng., 2015
Environmental Engineering

St. Lawrence College, 2008
Environmental Technician

EXPERIENCE

2016 to Present

Paterson Group Inc.

Environmental and Geotechnical Division
Environmental Consultant

2015 to 2016

Kanellos Consulting Inc.

Environmental Consultant

Summers 2013 & 2014

GFL Environmental Inc.

Environmental Technician

2008 to 2011, summer 2012

Petroleum Enviro Services (Div. of ASM Corrosion Control)

Environmental Consultant

SELECT LIST OF PROJECTS

Nortex Industrial Site - Soil and Groundwater Remediation - Kingston, ON
Contaminated Soil and Groundwater Sampling - Various sites - Eastern ON
Designated Substance Surveys and Reports - Various sites - Eastern ON
Mould Sampling, Assessments and Reports - Various sites - Eastern ON
Surcharge and Settlement Surveys - Ottawa, ON
Tank Site Remediation Program - Various sites - Alberta
Tank Installation Drawings (PTMAA) - Various sites - Alberta